PATENT SKETCH FORM

Attorney ___RDB___
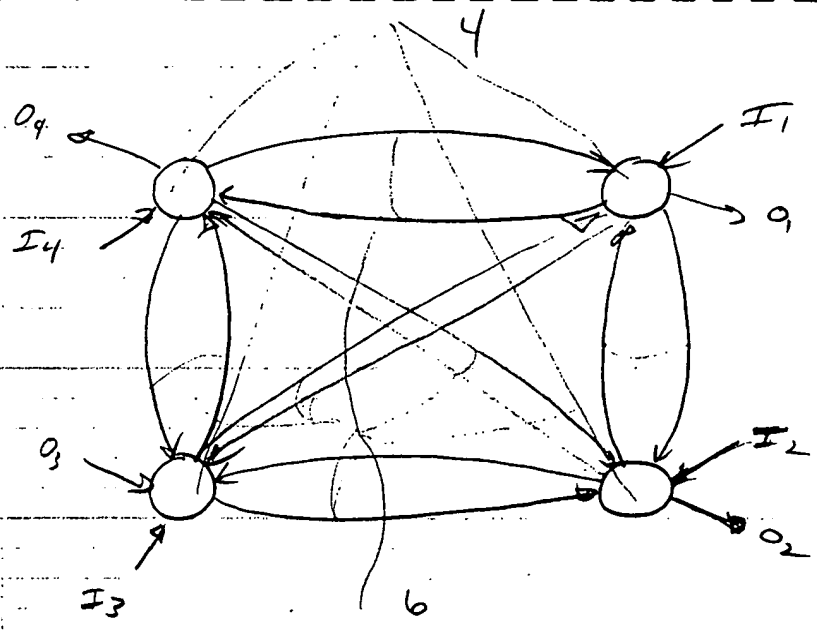
4

2

8

6

PRIOR ART

FIGURE 1

6

8

2

PRIOR ART

FIGURE 2

4

PATENT SKETCH FORM

Attorney _MDB_

O_4

I_4

I_1

O_1

O_3

I_2

O_2

I_3

4

6

PRIOR ART

FIGURE 3

V_1 — T_{C1}

V_2 — T_{C2}

V_3 — T_{C3}

V_N — T_{CND}

F → V_i

NEURON NODE

16

12

14

PRIOR ART

FIGURE 4

PATENT SKETCH FORM

Attorney_____VLDB_____ _ _ _ = = =

F $+$

$-$

$+$

$\tau_{ij} V_j$

$-$

$-$

PRIOR ART

FIGURE 5

R_{L1} R_{Fi}

V_1

R_{C2}

V_2

R_{i3}

V_3

$V+$

$-$

OTA

$+$

$V-$

V_i

R_{iN}

V_N

PRIOR ART

FIGURE 6
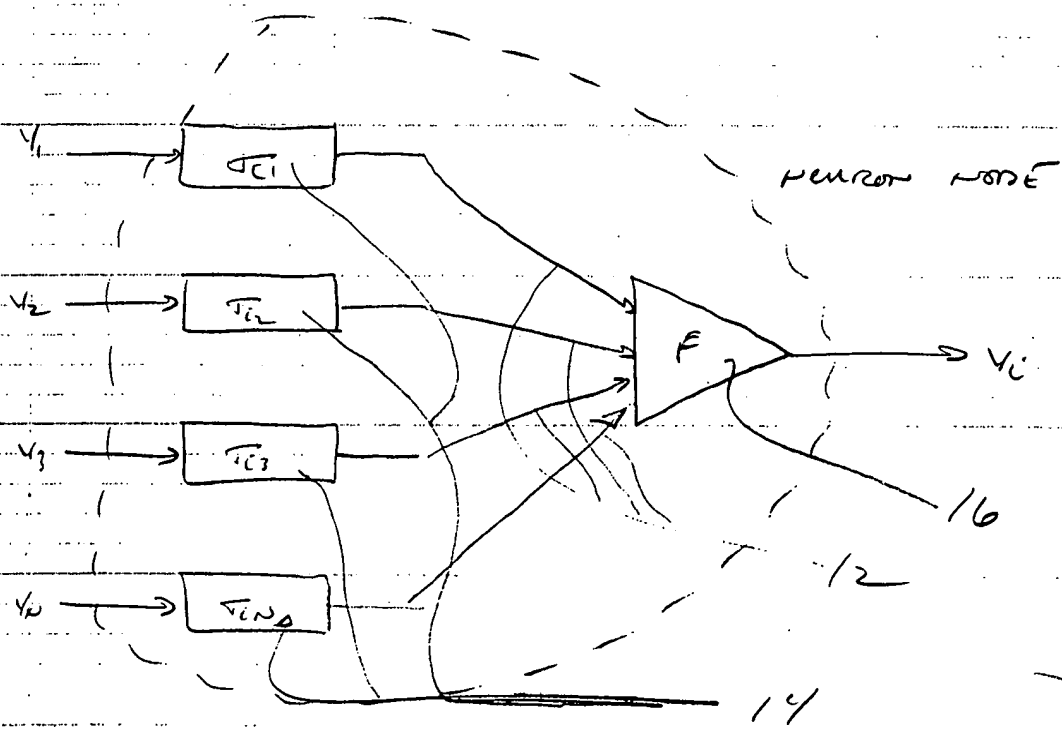
PATENT SKETCH FORM

Attorney _RDB_

PRIOR ART
FIGURE 7

PRIOR ART
FIGURE 8
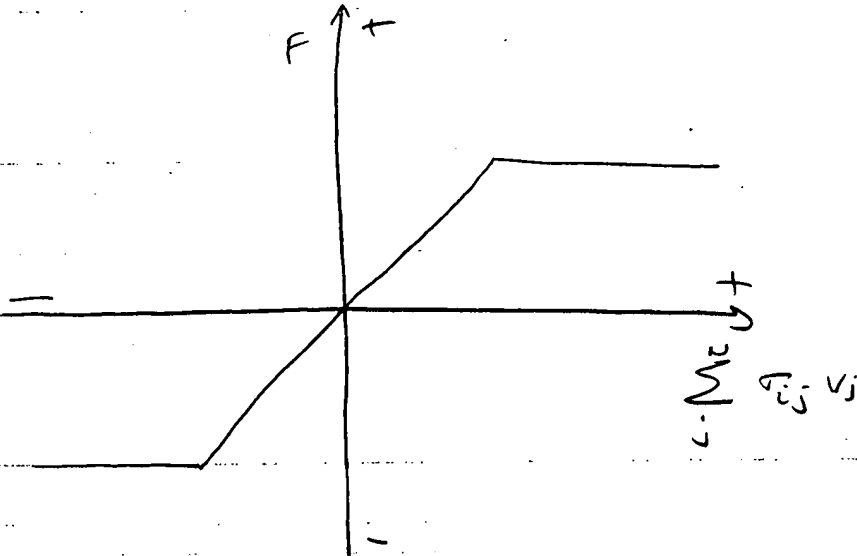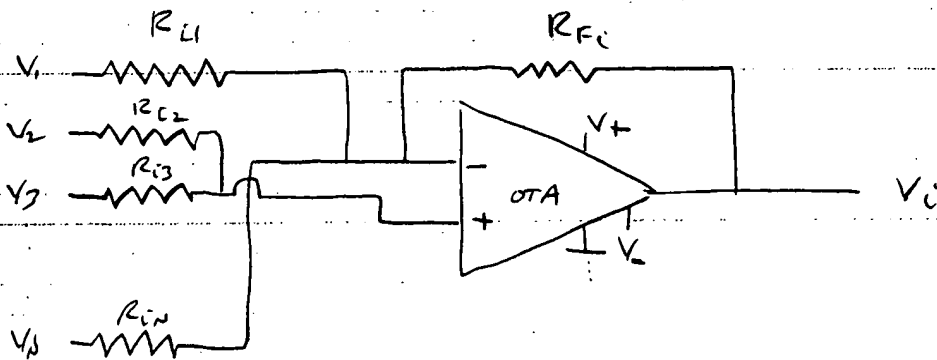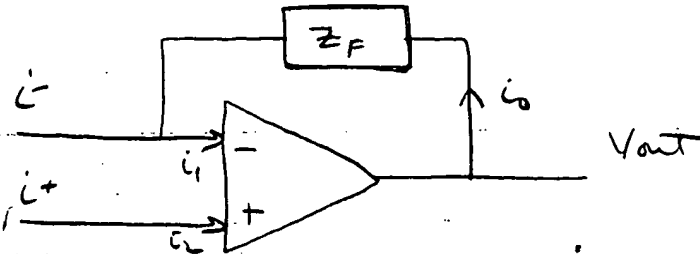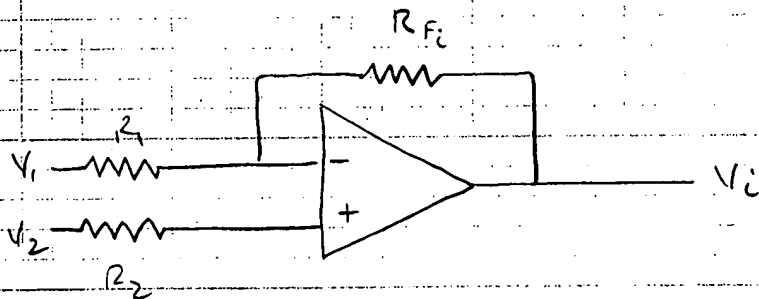
PATENT SKETCH FORM

Attorney ___ RDB ___

R_{F_1}

R_{F_2}

R_{F_3}

SUPPLY VOLTAGES
NOT SHOWN

O_1 O_2 O_3 OUTPUTS

IN_1 IN_2 IN_3 INPUTS
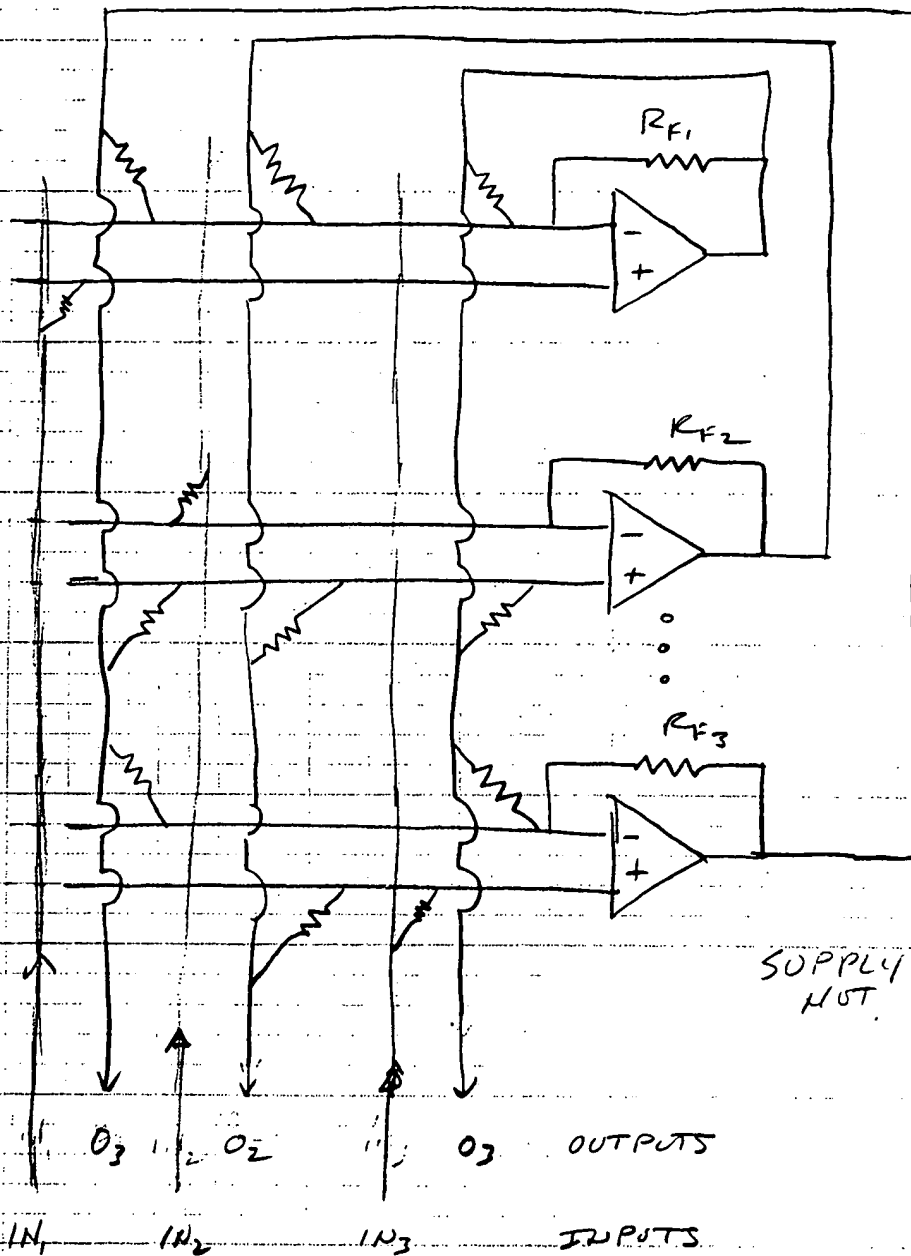
PRIOR ART
FIGURE 9

PATENT SKETCH FORM

Attorney RDB

INPUT DATA

EXTRACT FEATURES

SELECT FEATURES

CALCULATE TARGET STATISTICS AND DATA

CLASSIFICATION

DECISION CRITERIA

OUTPUT TARGET INFORMATION
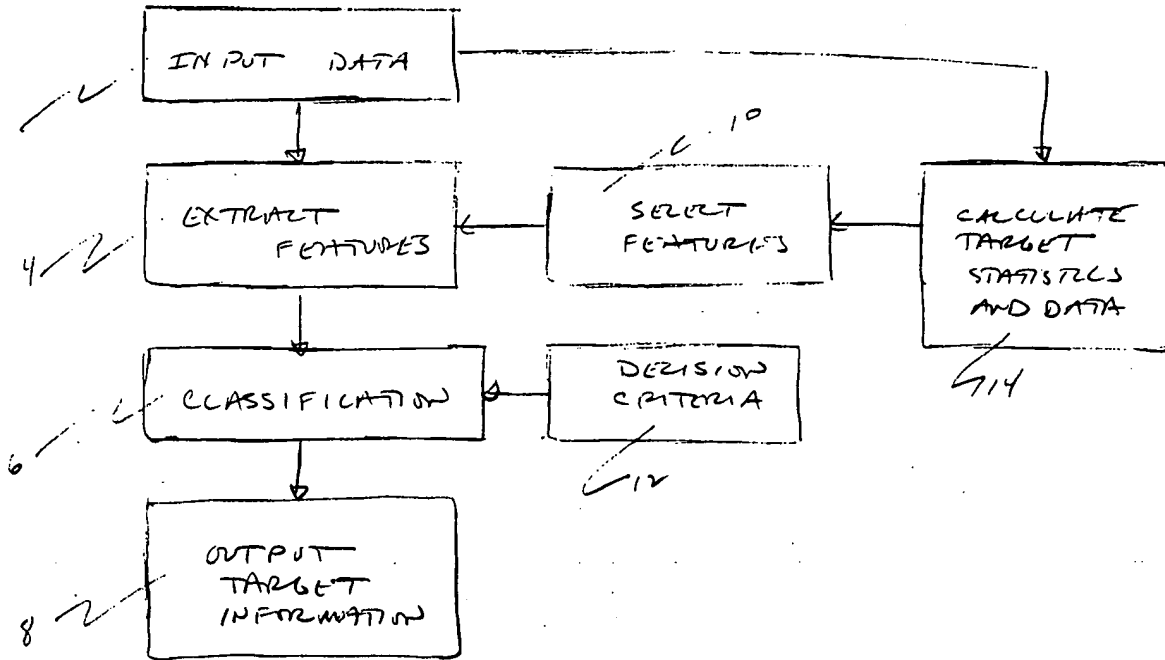
FIGURE 10
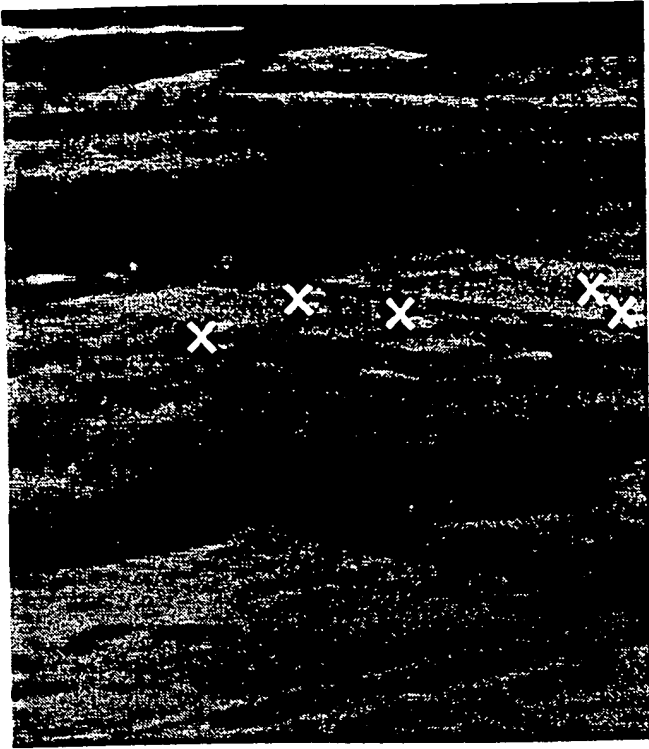
PATENT SKETCH FORM

Attorney_____

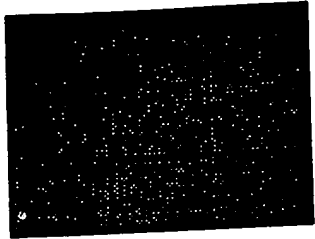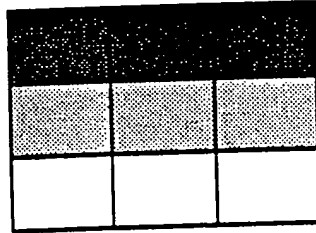Fig. 11

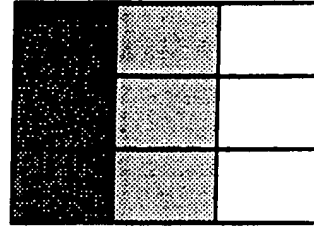PATENT SKETCH FORM

Attorney _____
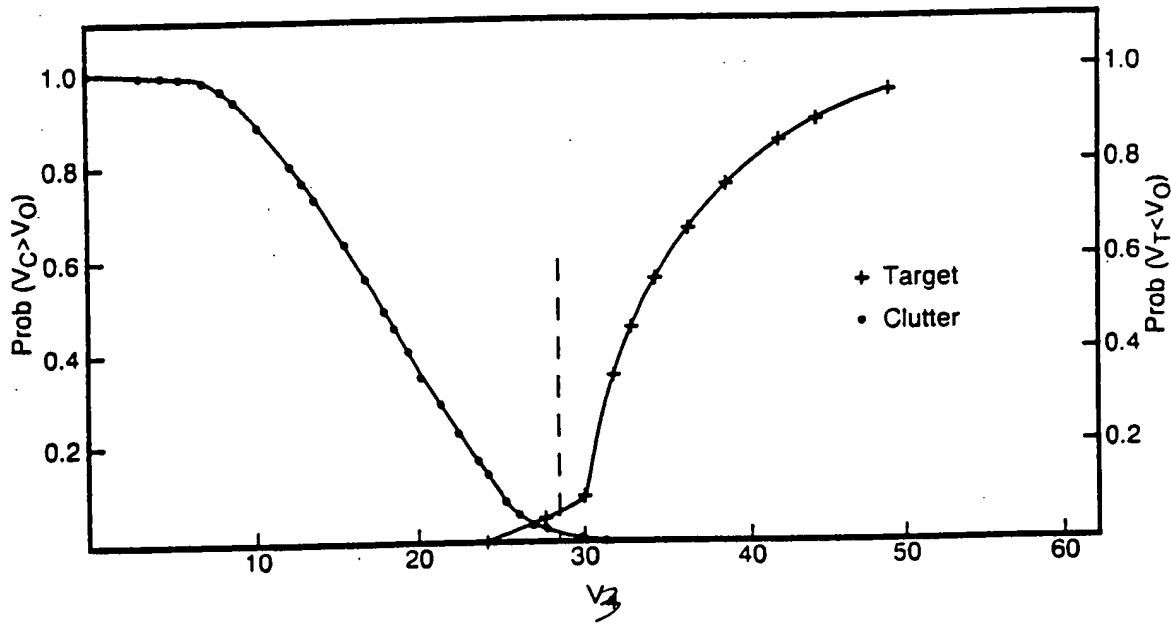
Filter 1   Filter 2   Filter 3
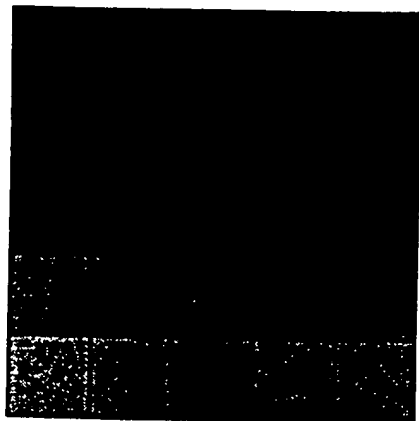
Fig 12a

Fig 20

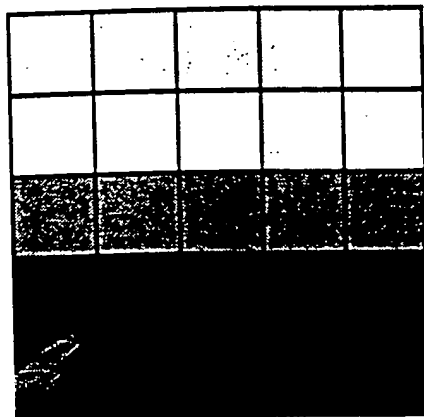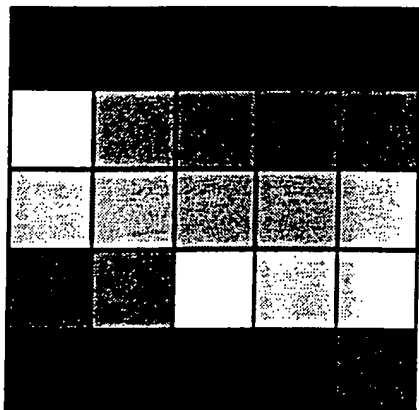## PATENT SKETCH FORM

Attorney_____
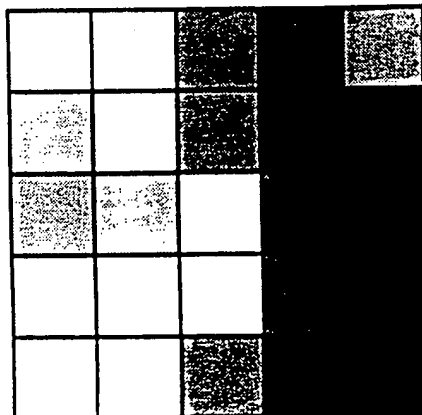

Filter 1 s/n = 1

FIG 13a

Filter 2 s/n = 7

FIG 3b
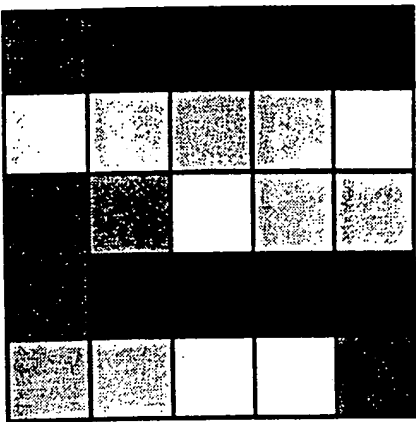

Filter 3 s/n = 7

FIG 13c
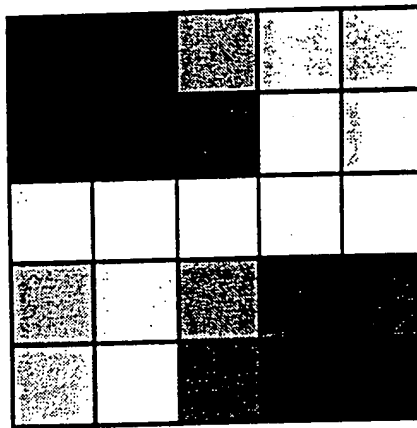

Filter 4 s/n = 5

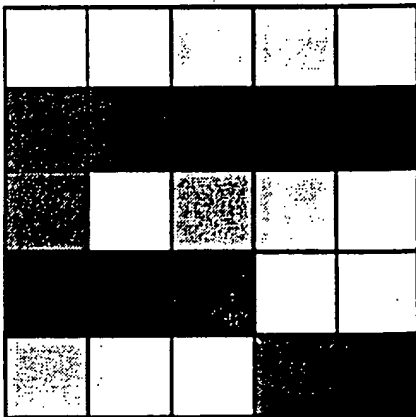FIG 3D

PATENT SKETCH FORM

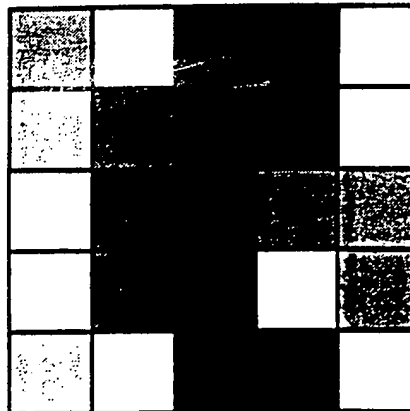Attorney _____

Filter 5 s/n = 23

FIG 13E

Filter 6 s/n = 8

FIG 13F

Filter 7 s/n = 13

Fig 13G

Filter 8 s/n = 9

FIG 13H

PATENT SKETCH FORM

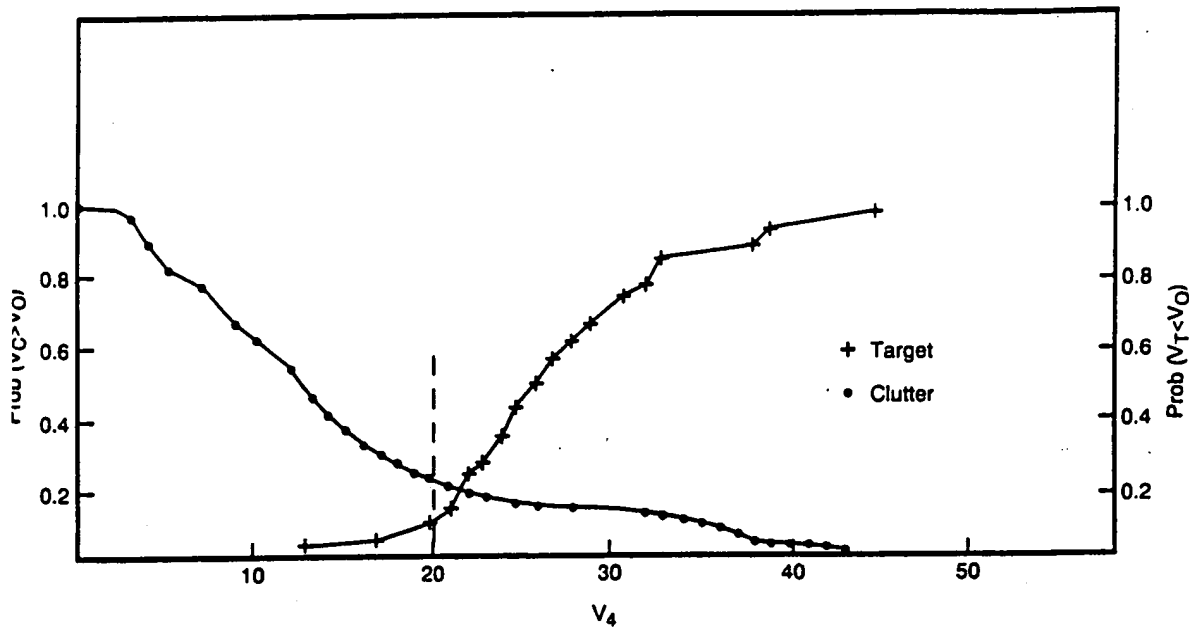Attorney _____

Fig 14

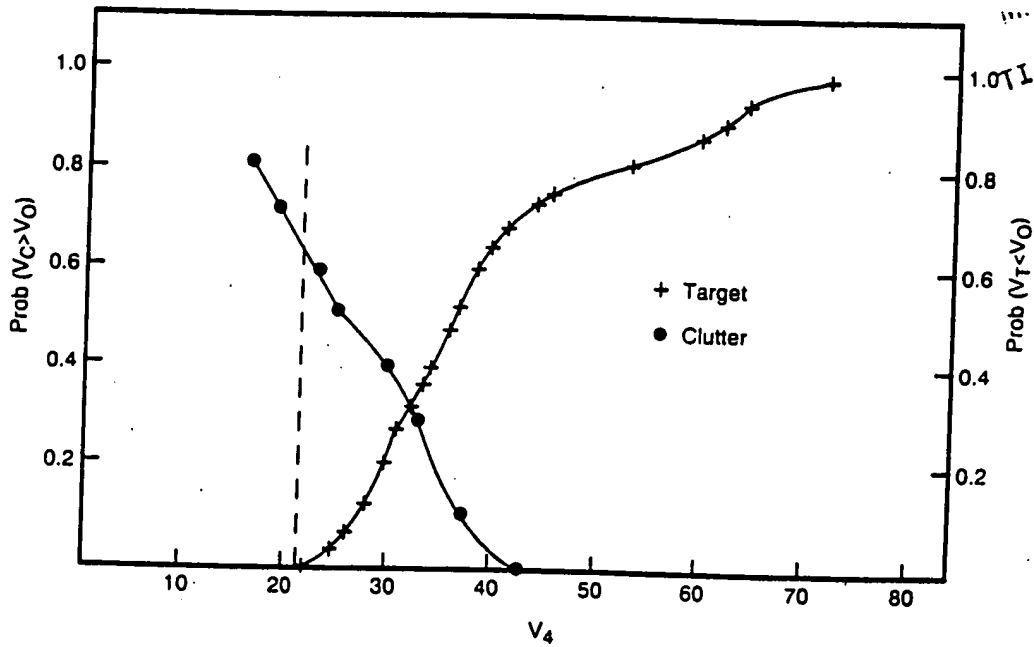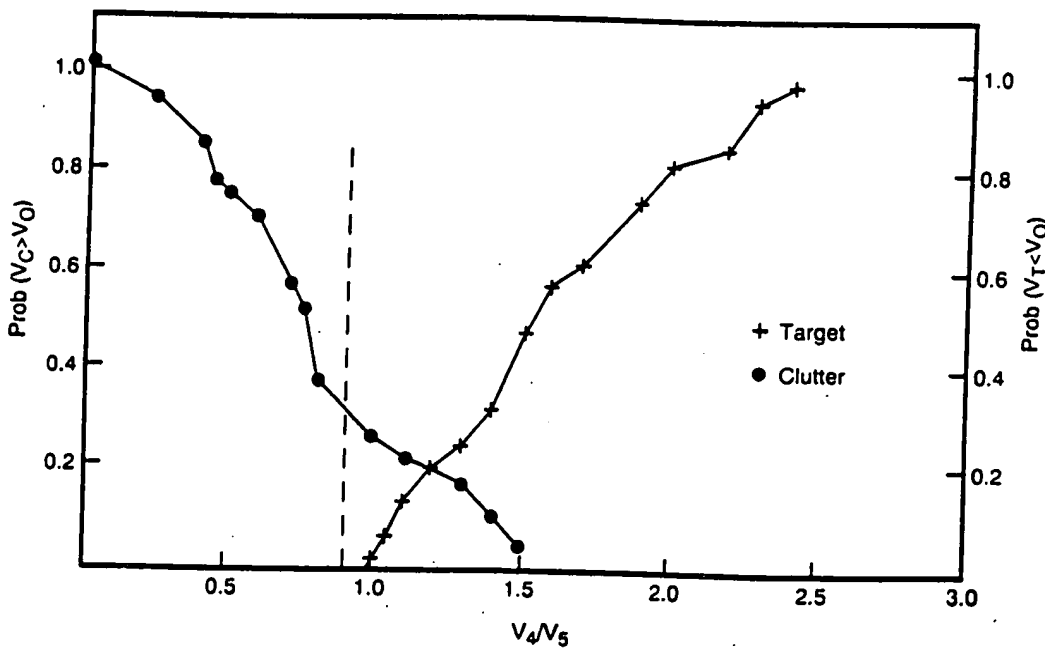# PATENT SKETCH FORM

FIG 15b

Fig 15a

13 ; 14

```
#define N    128      /* number of neurons in simulated network  */
#define C    100      /* number of simulated time steps          */
#define POSITIVE_RAIL  15.0   /* Simulated power supply limits */
#define NEGATIVE_RAIL -15.0
#define Rf             0.001  /* Feedback resistance common to */
                             /* all neurons                   */

main()
{
  double R[N][];
  double Vinitial[N];
  double Vnow[N];
  double sum;
  int c,i,j;

/* Get synapse list and copy initial neuron states into
   relaxation vector */

load_synapse_matrix(R,N);
copy_first_vector_into_second(Vinitial,Vnow,N);

  for(c=0;c<C;c++)                    /* for C time steps       */
    {
      for(i=0;i<N;i)                  /* for all neurons        */
        {
          sum = 0.0;
          for(j=0;j<N;j++)            /* get sum of products    */
            sum += (Rf/R[i][j])*Vnow[j];

          if(sum > POSITIVE_RAIL)     /* simulate ramp-threshold */
            Vnow[i] = POSITIVE_RAIL;
          else
          if(sum < NEGATIVE_RAIL)
            Vnow[i] = NEGATIVE_RAIL;
          else
            Vnow[i] = sum;
        }
    }

print(Vnow);    /* output final state of neurons */

} /* end of simulation program */
```

TABLE   1

PATENT SKETCH FORM

Attorney _____

Image Set	Number of Images	Location	Scene Description
1	4	G	a
2	2	G	b
3	1	S	c
4	1	S	d
5	2	N	e

a. Fields and Trees; Urban Clutter; Open and Partially Occluded Targets
b. Fields; Urban Clutter; Targets in Open
c. Fields; Urban Clutter; Targets in Open
d. Heavy Forests; Partially Occluded Targets
e. Fields and Heavy Forests; Partially Occluded Targets

Image Set	Number of Images	Location	Scene Description
1	21	S	Fields With Clusters of Trees; Urban Clutter; Open and Partially Occluded Targets.
2	3	N	Heavy Vegetation; Rural Clutter; Open targets.

Data Set II

TAbLE II